

# GO REGULATOR

## UPR-1 Series

Precision Pressure Regulators



The UPR-1 Series is the high purity version of the GO Regulator PR-1 whose design and performance reliability has been proven in over 30 years of field use. The UPR-1 design features include internal components with standard surface finishes better than 25 Ra. This feature provides the semiconductor end-user with a precision pressure regulator, economically priced for applications ranging from gas distribution to point of use in the manufacturing tool.

### Features & Specifications

- 25 Ra internal surface finish, standard
- Cv flow: 0.025, 0.06, 0.2, and 0.5
- 316L stainless steel body, cap, internals
- Male, female or internally machined VCR®-compatible ports
- $1 \times 10^{-9}$  atm. cc/sec, inboard leak spec

### Applications

- Bulk inert gas distribution
- Diffusion furnaces
- Epitaxial reactors
- Specialty gas distribution
- Manufacturing tool

### Options

- Wetted materials for corrosive service Hastelloy®

pressure regulators

### GO Regulator

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# UPR-1 Series

## How to Order

### UPR1 -

#### BODY MATERIAL

¼" VCR® only, see 'Outline & Mounting Dimensions' for other end-to-end dimensions

- 1 316L stainless steel, 3.70 end-to-end
- 2 Hastelloy® C, 3.70 end-to-end
- 3 316L stainless steel, 4.12 end-to-end

#### PORT CONFIGURATIONS

- A Standard
- For more port configurations, see page 7.

#### PROCESS & GAUGE PORTS

- 1 ¼" FVCR process ports, ¼" FVCR gauge ports
- 2 ¼" FVCR process ports, ¼" swivel MVCR gauge ports
- 3 ¼" FVCR process ports, ¼" IVCR gauge ports
- 4 ¼" swivel MVCR process ports, ¼" FVCR gauge ports
- 5 ¼" swivel MVCR process ports, ¼" swivel MVCR gauge ports
- 9 ¼" IVCR process ports, ¼" IVCR gauge ports
- A ⅜" FVCR process ports, ¼" FVCR gauge ports
- B ⅜" FVCR process ports, ¼" swivel MVCR gauge ports
- C ⅜" FVCR process ports, ¼" IVCR gauge ports
- D ⅜" swivel MVCR process ports, ¼" FVCR gauge ports
- E ⅜" swivel MVCR process ports, ¼" swivel MVCR gauge ports
- F ⅜" swivel MVCR process ports, ¼" IVCR gauge ports
- G ½" FVCR process ports, ¼" FVCR gauge ports
- H ½" FVCR process ports, ¼" swivel MVCR gauge ports
- I ½" FVCR process ports, ¼" IVCR gauge ports
- J ½" swivel MVCR process ports, ¼" FVCR gauge ports

#### CAP ASSEMBLY

- 1 Standard, stainless steel
- 4 Panel mount, stainless steel
- 7 Captured vent, stainless steel

#### DIAPHRAGM MATERIAL

- 1 Teflon®/stainless steel
- 6 Tefzel ring/stainless steel
- 0 Teflon®/Hastelloy® C

#### DIAPHRAGM TYPE

- 1 Facing/metal backing
- 4 Vacuum-assist spring

#### OUTLET RANGE

- C 0–10 psig
- D 0–25 psig
- E 0–50 psig
- G 0–100 psig
- I 0–250 psig
- J 0–500 psig
- W 0–750 psig

#### FLOW COEFFICIENT (Cv)

- 3 0.06
- 5 0.2
- C 0.025

#### SEAT MATERIAL

- A Tefzel®
- H PCTFE (formerly Kel-F® 81)
- Q PEEK™

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra

*NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.gore.com](http://www.gore.com) or contact the factory.*

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density Teflon®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	500° F (260° C)	@	3600 psig (24.82 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK™	500° F (260° C)	@	3600 psig (24.82 MPa)
PEEK™	175° F (80° C)	@	6000 psig (41.37 MPa)

\* Temperatures in excess of 175° F (80° C) require the use of a metal knob or the tamper-proof option.

VCR® is a registered trademark of Cajon Co.

Hastelloy® is a registered trademark of Haynes International, Inc.

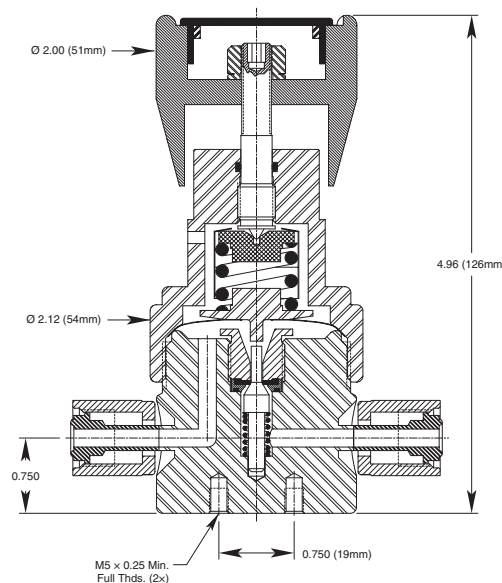
Teflon® and Tefzel® are registered trademarks of the DuPont Company.

Kel-F® is a registered trademark of 3M Company.

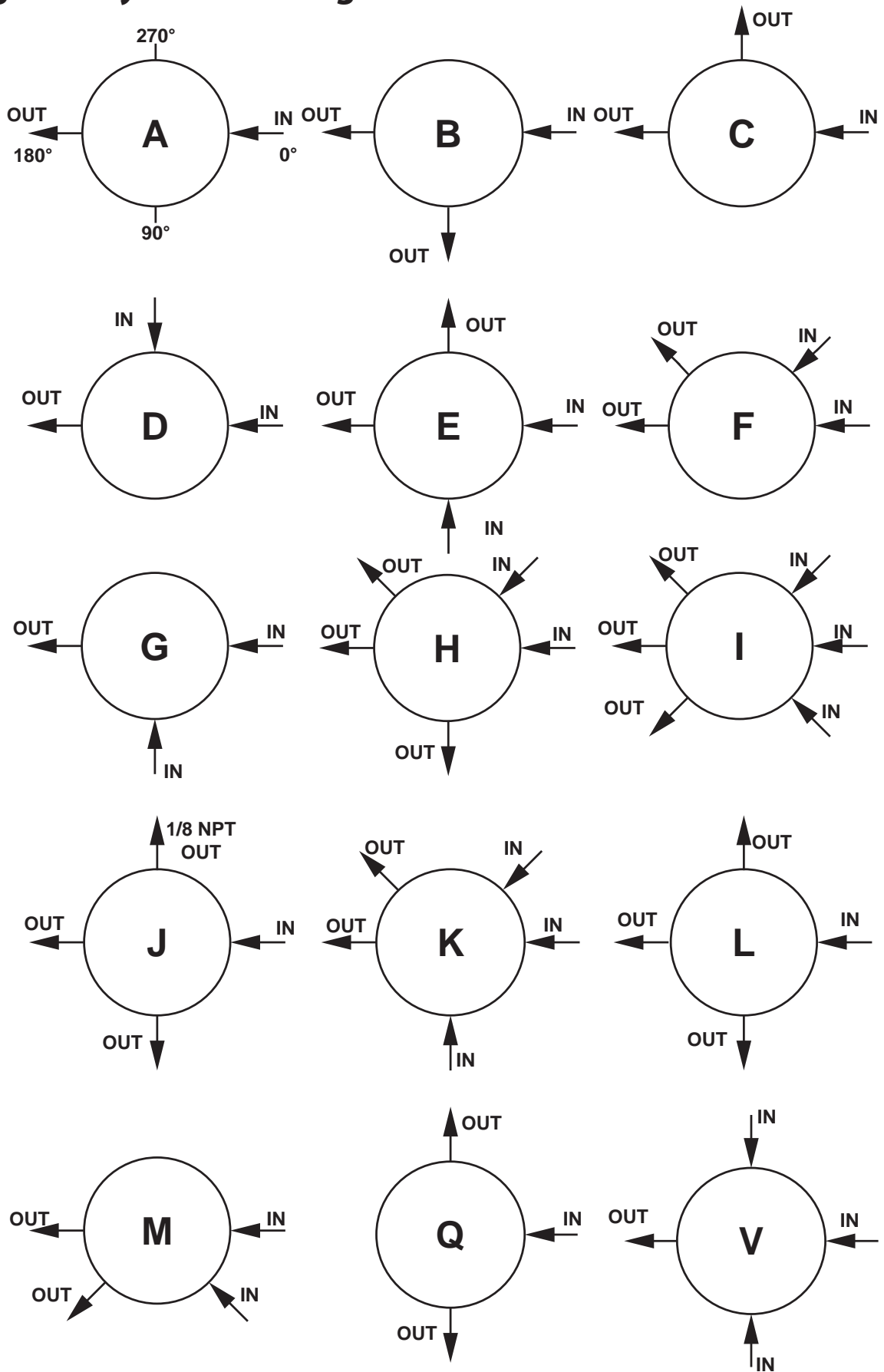
PEEK™ is a trademark of Victrex PLC.

## Outline & Mounting Dimensions

Panel mount option requires 1.300 (35.3mm) minimum diameter panel cut out



# Porting Configurations for High Purity Pressure Regulators



LOCATION OF PORTS FROM  
TOP VIEW